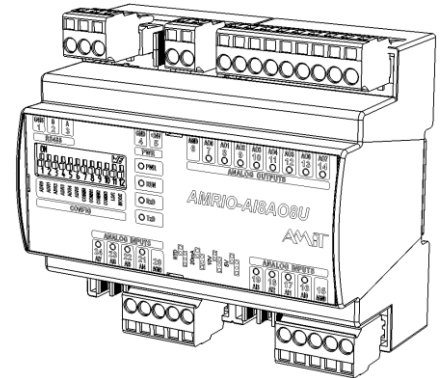


# AMRIO-AI8AO8U

Combined extension module

- 8 analogue voltage outputs
- 8 universal analogue inputs
- MODBUS RTU / ARION (RS485) communication
- Possibility of user programming
- DIN rail mounting
- Power supply 24 V DC



## TECHNICAL DATA

<b>Outputs</b>	8
Common conductor	AGND <sup>1)</sup>
Output voltage	0 V to 10 V DC
Maximum output current	2 mA DC
Converter resolution	12 bits
Galvanically isolated outputs	No
<b>Inputs</b>	8
Common conductor	AGND <sup>1)</sup>
Input ranges (configurable individually)	(0 to 5) V DC / (0 to 10) V DC / (0 to 20) mA DC / RTD / dry contact / digital input 24 V DC
Range selection	Jumpers on the module
Converter resolution	12 bits
Input overvoltage protection	Diodes
Max. voltage / current on the input	50 V DC / 30 mA DC permanently <sup>2)</sup>
Galvanically isolated inputs	No
<b>Communication</b>	RS485
Galvanically isolated line	Yes <sup>3)</sup>
Line overvoltage protection	Transil 600 W
Communication speeds	9,600 bps to 115,200 bps
Number of modules in the network / segment	63
<b>Power supply</b>	19.2 V DC to 28.8 V DC
Consumption (w/o inputs / outputs)	Max. 50 mA at 24 V DC
<b>Other</b>	
Connection	Spring-loaded connectors WAGO 231
Ingress protection rate	IP20
Operating temperature range	-20 °C to 70 °C
Maximum ambient humidity	< 95 % non-condensing
Mounting	On a 35 mm DIN rail
Weight	0.22 kg
Dimensions (w × h × d)	(106 × 101 × 62) mm
Programming	DetStudio / EsiDet

<sup>1)</sup> AGND terminal is internally connected to the module power supply connector GND terminal.

<sup>2)</sup> Max. voltage applicable for ranges (0 to 5) V / (0 to 10) V / RTD and current for range (0 to 20) mA.

<sup>3)</sup> Isolation strength 500 V AC, galvanic isolation must not be used for separation of safe parts from dangerous parts.

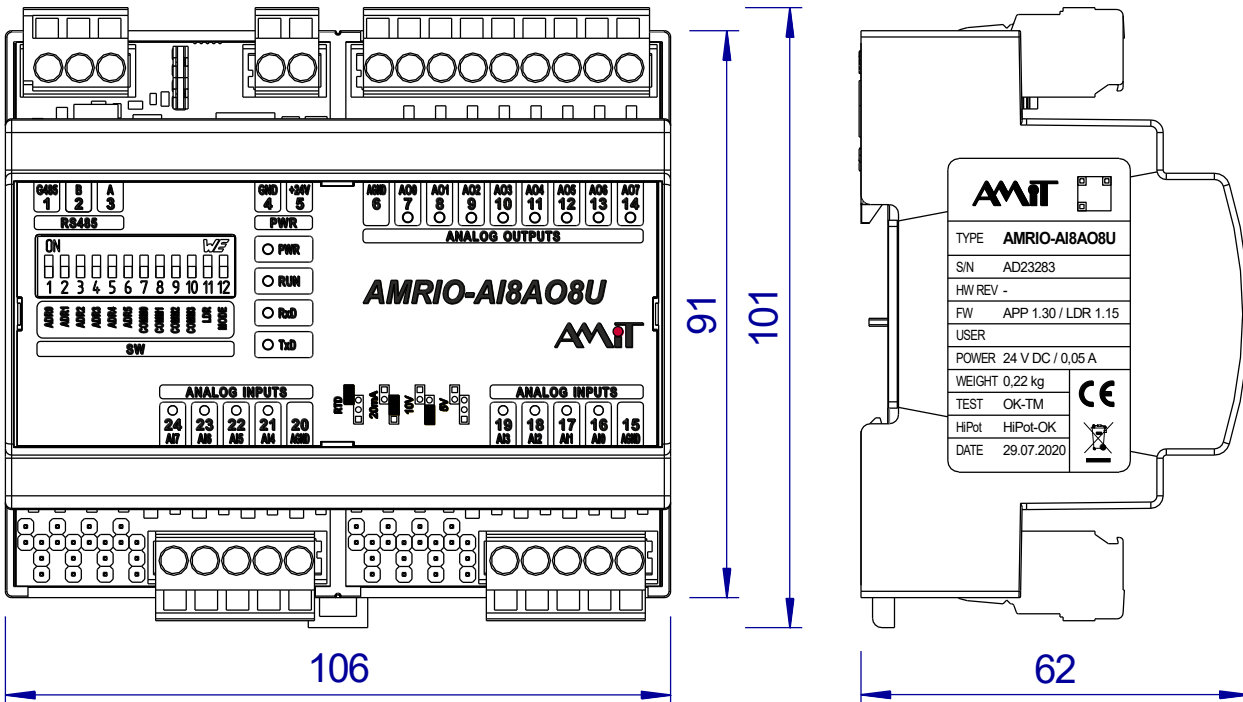
## ORDERING INFORMATION

<b>AMRIO-AI8AO8U</b>	Module 8 universal analogue inputs and 8 analogue outputs, WAGO connectors
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## RECOMMENDED DRAWING SYMBOL

<b>AMRIO-AI8AO8U</b>			
<b>AMIT</b>			
<b>AI</b>		<b>RS485</b>	
24	AI7	G485	1
23	AI6	B	2
22	AI5	A	3
21	AI4		
20	AGND		
		<b>PWR</b>	
		GND	4
		+24V	5
		<b>AO</b>	
		AGND	6
		AO0	7
		AO1	8
		AO2	9
		AO3	10
		AO4	11
		AO5	12
		AO6	13
		AO7	14
<b>AI</b>			
19	AI3		
18	AI2		
17	AI1		
16	AI0		
15	AGND		

## MECHANICAL DIMENSIONS



# AMRIO-AI8AO8U

Combined extension module

## DESCRIPTION OF TERMINALS

Terminal	Signal	Significance	Terminal	Signal	Significance
1	G485	RS485, ground	13	AO6	Output 6
2	B	RS485, signal B	14	AO7	Output 7
3	A	RS485, signal A	15	AGND	Analogue ground
4	GND	Power supply, ground	16	AI0	Input 0
5	+24V	Power supply, +24 V DC	17	AI1	Input 1
6	AGND	Analogue ground	18	AI2	Input 2
7	AO0	Output 0	19	AI3	Input 3
8	AO1	Output 1	20	AGND	Analogue ground
9	AO2	Output 2	21	AI4	Input 4
10	AO3	Output 3	22	AI5	Input 5
11	AO4	Output 4	23	AI6	Input 6
12	AO5	Output 5	24	AI7	Input 7

## RS485 JUMPERS

Jumpers	Significance
Fitted	Terminal station – idle states and terminations are active.
Not fitted	Intermediate station – idle states and terminations are inactive.

Note: Jumpers are always fitted simultaneously.

Procedures of setting communication parameters, including the list of supported MODBUS functions and mapping of signals in the ARION protocol, are included in the operation manual for this module ([amrio-ai8ao8u\\_g\\_en\\_XXX.pdf](#)).

The **AMRIO-AI8AO8U** module with the application loaded during its manufacture can be used as a fully compatible substitute for modules **DM-UI8AO8U**, **DM-AO8U**, **DMM-UI8AO8U** and **DMM-AO8U**.

Data in this datasheet is informative only. Binding detailed information can be found in the operation manual ([amrio-ai8ao8u\\_g\\_en\\_XXX.pdf](#)). Documentation and examples are available at [amitautomation.com](http://amitautomation.com).